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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,244	10/30/2001	Guillermo J. Tearney	00786-443001 / MGH 1542.1	4538
30873	7590	01/06/2006	EXAMINER SMITH, RUTH S	
DORSEY & WHITNEY LLP INTELLECTUAL PROPERTY DEPARTMENT 250 PARK AVENUE NEW YORK, NY 10177			ART UNIT 3737	
PAPER NUMBER				

DATE MAILED: 01/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Tulsa

<b>Office Action Summary</b>	<b>Application No.</b> 10/016,244	<b>Applicant(s)</b> TEARNEY ET AL.	
	<b>Examiner</b> Ruth S. Smith	<b>Art Unit</b> 3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4,7-27,39-43 and 62-83 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26,70,71,82 and 83 is/are allowed.
- 6) ☒ Claim(s) 1-3,7-20,27,39,40,72 is/are rejected.
- 7) ☒ Claim(s) 4,21-25,41-43,62-69 and 73-81 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

***Claim Objections***

Claims 7-9 are objected to because of the following informalities: Claim 7 depends from cancelled claim 6. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3,7-10,12-20,27,39,40,72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimnyakov et al in view of Guzelsu and Lemelson (5,735,276). Zimnyakov et al disclose temporally correlating dynamic speckle patterns obtained at time intervals sufficient to detect Brownian and cellular motion (pp. 5596 and 5601 also disclose 50ps scanning intervals) in order to monitor changes in tissue structure (pp. 5594-95). Zimnyakov et al disclose that the technique set forth was carried out in-vitro. It is well known in the art to first perform a method in-vitro in an experimental set-up prior to in-vivo testing and the use of optical diagnostic methods in-vivo are old and well known results of first performing the test in-vitro. An example of such is seen in Guzelsu. Furthermore, it is known to provide optical testing to both skin and internal

tissues as seen in Lemelson. It would have been obvious to one skilled in the art to have carried out the method of Zimnyakov et al in-vivo as is a well known expedient in the art of optical tissue diagnosis and to either monitor the skin or internal tissue such as taught by Lemelson. The monitoring of tissue internally is known to involve the use of a catheter or endoscope as is also taught by Lemelson. In the absence of any showing of criticality, the specific type of tissue tested would have been an obvious matter of design choice. With respect to claim 13, the specific placement of the detector with respect to the tissue would have been an obvious matter of design choice of known equivalents in the art. With respect to claim 40, it would have been obvious to one skilled in the art that assessment of tissue structure would have included assessment of the tissue thickness in that it is a well known parameter of the tissue structure.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zimnyakov et al alone or further in view of Izatt et al, or Dunne or Rolland et al. Zimnyakov et al disclose temporally correlating dynamic speckle patterns obtained at time intervals sufficient to detect Brownian and cellular motion (pp. 5596 and 5601 also disclose 50ps scanning intervals) in order to monitor changes in tissue structure (pp. 5594-95). Zimnyakov et al. does not explicitly address a superluminescent diode, however, at the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to use a superluminescent diode, because Applicant has not disclosed that such a light source provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the coherent light sources of Zimnyakov et al. to detect speckle changes caused by microscopic motion of objects in tissue. It should also be noted that the use of superluminescent diodes as light sources in an optical diagnostic device is well known as seen for example in Izatt et al, Dunne and Rowland et al. It would have been obvious to one skilled in the art to have modified Zimnyakov et al such that the light is provided by a superluminescent diode. Such a modification merely involves the substitution of one well known type of light source for another.

***Allowable Subject Matter***

Claims 4,21-25,41-43,62-69,73-81 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 26,70,71,82,83 are allowable over the prior art of record.

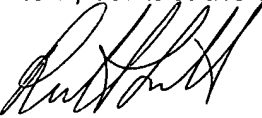
***Response to Arguments***

Applicant's arguments with respect to claims 1-4,7-27,39-43,62-83 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth S. Smith whose telephone number is 571-272-4745. The examiner can normally be reached on M-F 7:30 AM-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ruth S. Smith  
Primary Examiner  
Art Unit 3737